

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A fuel cell system comprising:
 - a fuel cell having an electrolyte, a cathode provided at one side of the electrolyte, an anode with a hydrogen permeable metal layer provided at the other side of the electrolyte, a cathode channel for supplying oxidizing gas to the cathode, an anode channel for supplying fuel gas containing hydrogen to the anode;
 - a hydrogen permeable metal layer degradation prevention section configured to reduce a partial pressure of hydrogen in the anode channel for preventing degradation of the hydrogen permeable metal layer;
 - a temperature parameter acquisition section configured to acquire a parameter relating to a temperature of the hydrogen permeable metal layer; and
 - a fuel cell controller for controlling an operation state of the fuel cell system, wherein the fuel cell controller has a degradation prevention mode for causing the hydrogen permeable metal layer degradation prevention section to operate when the temperature of the hydrogen permeable metal layer represented by the temperature parameter deviates from a predetermined temperature range.
2. (Original) A fuel cell system according to claim 1, wherein the hydrogen permeable metal layer degradation prevention section includes a gas supply reduction section configured to reduce a partial pressure of hydrogen in the anode channel by decreasing a supply of the fuel gas to the anode channel.
3. (Original) A fuel cell system according to claim 1, wherein the hydrogen permeable metal layer degradation prevention section includes:
 - a hydrogen separation device separating hydrogen in fuel gas; and

a hydrogen concentration reduction section configured to reduce a partial pressure of hydrogen in the anode channel by supplying fuel gas whose hydrogen concentration has been decreased by the hydrogen separation device to the anode channel.

4. (Original) A fuel cell system according to claim 3, wherein the hydrogen permeable metal layer degradation prevention section further comprising:

a gas supply reduction section for decreasing a partial pressure of hydrogen in the anode channel by decreasing a supply of the fuel gas to the anode channel; and

the fuel cell controller configured to cause the hydrogen concentration reduction section to operate when a temperature of the hydrogen permeable metal layer represented by the temperature parameter is below a predetermined lower temperature limit, and to cause the gas supply reduction section to operate when a temperature of the hydrogen permeable metal layer represented by the temperature parameter is above a predetermined upper temperature limit.

5. (Previously Presented) A fuel cell system according to claim 1, wherein the hydrogen permeable metal layer degradation prevention section includes a low hydrogen concentration gas supply section configured to decrease a partial pressure of hydrogen in the anode channel by supplying gas with a hydrogen concentration lower than the fuel gas to the anode channel.

6. (Previously Presented) A fuel cell system according to claim 1, further comprising:

a temperature increase facilitation section configured to facilitate a temperature increase in the hydrogen permeable metal layer; and

a temperature increase mode for causing the temperature increase facilitation section to operate when a temperature of the hydrogen permeable metal layer represented by

the temperature parameter is below a lower temperature limit of the predetermined temperature range.

7. (Original) A fuel cell system according to claim 6, wherein
the fuel cell includes a heating channel, which is a gas channel for which an oxidizing catalyst is provided, and
the temperature increase facilitation section includes a hydrogen permeable metal layer heating section configured to heat the hydrogen permeable metal layer by supplying gas including a combustible component and a oxidizing component to the heating channel.

8. (Previously Presented) A fuel cell system according to claim 1, further comprising a temperature decrease facilitation section configured to facilitate a decrease in temperature of the hydrogen permeable metal layer, wherein
the fuel cell controller includes a temperature decrease mode for causing the temperature decrease facilitation section to operate when a temperature of the hydrogen permeable metal layer represented by the temperature parameter is above an upper temperature limit of the predetermined temperature range.

9. (Previously Presented) A fuel cell system according to claim 1, further comprising a reformer generating fuel gas containing hydrogen from reforming material having hydrogen elements, wherein
the fuel cell controller causes the hydrogen permeable metal layer degradation prevention section to operate while maintaining operation of the reformer.

10-16. (Canceled)